We claim:

1) A device for inspecting microscopic objects, comprising:
   A) a lens,
   B) a plurality of LEDS arranged in an array underneath said lens, comprising:
      1) lighted LEDS, and
      2) unlighted LEDS, and
   C) at least one computer in communication control of said plurality of LEDS, wherein said at least one computer is programmed to turn on selected LEDS from said plurality of LEDS to form said lighted LEDS, and turn off other selected LEDS from said plurality of LEDS to form said unlighted LEDS, wherein said lighted LEDS form a pattern of lighted LEDS underneath said lens.

2) The device as in Claim 1, wherein said at least one computer is in communication control with said lens, wherein said at least one computer is programmed to move said lens laterally over said plurality of LEDS, wherein said at least one computer is programmed to move said pattern of lighted LEDS so that said pattern of LEDS remains underneath said lens as said lens is moved laterally.

3) The device as in Claim 1, wherein said lens and said plurality of LEDS move laterally relative to each other, wherein said at least one computer is programmed to move said pattern of lighted LEDS so that said pattern of LEDS remains underneath said lens during said relative lateral movement.

4) The device as in Claim 1, wherein said device for inspecting microscopic images is a microscope and wherein said lens is attached to said microscope.

5) The device as in Claim 1, wherein said device for inspecting microscopic images is a camera and wherein said lens is attached to said camera.

6) The device as in Claim 1, wherein said pattern of lighted LEDS provides dark field illumination.

7) The device as in Claim 1, wherein said microscopic objects are microscopic crystals.

8) The device as in Claim 7, further comprising:
   A) at least one camera attached to said lens, and
   B) an indexing device for sequentially placing said microscopic crystals in camera-view of said at least one camera lens,

wherein said at least one computer is programmed to control said indexing device and said at least one camera, wherein said at least one computer is programmed to receive from said at least one camera images of said plurality of microscopic crystals, wherein said at least one computer is programmed to classify said plurality of microscopic crystals.

9) The device as in Claim 8, further comprising a computer monitor, wherein an operator interfacing with said at least one computer manually inputs a score to classify said plurality of microscopic crystals after observing said plurality of microscopic crystals on said computer monitor.

10) The device as in Claim 8, wherein said at least one computer automatically classifies said plurality of microscopic crystals after receiving said images.

11) The device as in Claim 1, wherein said computer is further programmed to vary the intensity level of said plurality of LEDS.

12) The device as in Claim 1, wherein said intensity level is variable from off to full current on.

13) The device as in Claim 1, wherein said pattern of lighted LEDS comprises at least two intensity levels.

14) A device for inspecting microscopic objects, comprising:

A) a lens means,

B) an array means comprising LEDS, said LEDS comprising:

   1) lighted LEDS, and

   2) unlighted LEDS, and

C) at least one computer means in communication control of said array means, wherein said at least one computer means is programmed to turn on selected LEDS from said plurality of LEDS to form said lighted LEDS, and turn off other selected LEDS from said plurality of LEDS to form said unlighted LEDS, wherein said lighted LEDS form a pattern of lighted LEDS underneath said lens.

15) The device as in Claim 14, wherein said at least one computer means is in communication control with said lens means, wherein said at least one computer means is programmed to move said lens means laterally over said array means, wherein said at least one computer means is programmed to move said pattern of lighted LEDS so that said pattern of LEDS remains underneath said lens means as said lens means is moved laterally.

16) The device as in Claim 14, wherein said lens means and said array means move laterally relative to each other, wherein said at least one computer means is programmed to move said pattern of lighted LEDS so that said pattern of LEDS remains underneath said lens means during said relative lateral movement.

17) The device as in Claim 14, wherein said device for inspecting microscopic images is a microscope means and wherein said lens means is attached to said microscope means.

18) The device as in Claim 14, wherein said device for inspecting microscopic images is a camera means and wherein said lens means is attached to said camera means.

19) The device as in Claim 14, wherein said pattern of lighted LEDS provides dark field illumination.

20) The device as in Claim 14, wherein said microscopic objects are microscopic crystals.

21) The device as in Claim 20, further comprising:

A) at least one camera means attached to said lens, and

B) an indexing means for sequentially placing said microscopic crystals in camera-view of said at least one camera means,

wherein said at least one computer means is programmed to control said indexing means and said at least one camera means, wherein said at least one computer means is programmed to receive from said at least one camera means images of said plurality of microscopic crystals, wherein said at least one computer means is programmed to classify said plurality of microscopic crystals.

22) The device as in Claim 21, further comprising a computer monitor means, wherein an operator interfacing with said at least one computer means manually inputs a score to classify said plurality of microscopic crystals after observing said plurality of microscopic crystals on said computer monitor means.

23) The device as in Claim 21, wherein said at least one computer means automatically classifies said plurality of microscopic crystals after receiving said images.

24) The device as in Claim 14, wherein said computer means is further programmed to vary the intensity level of said LEDS.

25) The device as in Claim 14, wherein said intensity level is variable from off to full current on.

26) The device as in Claim 14, wherein said pattern of lighted LEDS comprises at least two intensity levels.